

CMOS Back-End Spectrometer Processors

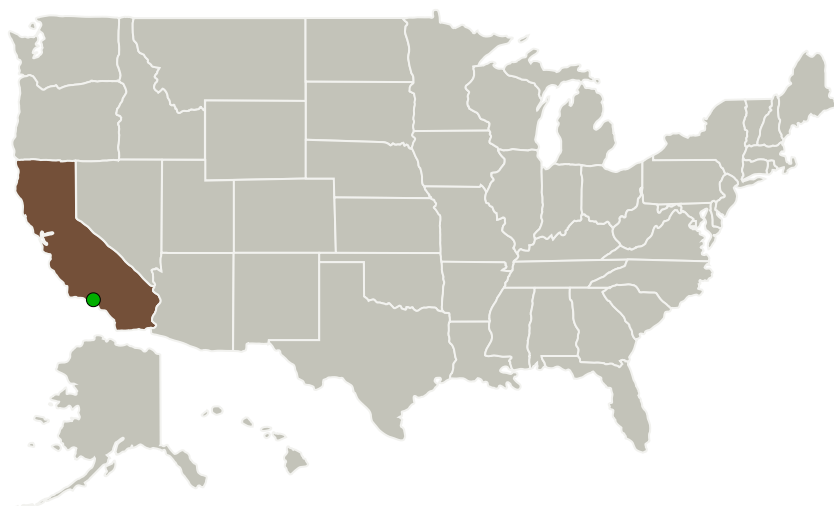
Completed Technology Project (2018 - 2020)



Project Introduction

This effort will demonstrate the advanced integration capabilities of CMOS system-on-chip (SoC) technology to drastically reduce size, weight, power, and cost for next generation NASA earth science heterodyne mmW spectrometer /radiometer instruments, enabling new platforms and large focal arrays.

Primary U.S. Work Locations and Key Partners



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Organizational Responsibility

Responsible Mission Directorate:

Science Mission Directorate (SMD)

Lead Organization:

California Institute of Technology (CalTech)

Responsible Program:

Astrophysics Research and Analysis

Organizations Performing Work	Role	Type	Location
California Institute of Technology(CalTech)	Lead Organization	Academia	Pasadena, California
● Jet Propulsion Laboratory(JPL)	Supporting Organization	NASA Center	Pasadena, California
University of Southern California(USC)	Supporting Organization	Academia	Los Angeles, California

Primary U.S. Work Locations

California

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Project Management

Program Director:

Michael A Garcia

Program Manager:

Dominic J Benford

Principal Investigator:

Adrian J Tang

Co-Investigators:

Karen R Piggee
Goutam Chattopadhyay
Mau-chung Frank Chang
Imran Mehdi
Paul F Goldsmith

Technology Areas

Primary:

- TX08 Sensors and Instruments
 - └ TX08.1 Remote Sensing Instruments/Sensors
 - └ TX08.1.4 Microwave, Millimeter-, and Submillimeter-Waves

Target Destination

Outside the Solar System